

## OPTICAL NETWORKING ASSEMBLY

### ABSTRACT OF THE DISCLOSURE

5 An optical network assembly includes a planar lightguide circuit (PLC) and a filtering device. A PLC can have at least two optical paths for propagating optical energy. The PLC can be designed to channel optical energy with its optical paths towards the filtering device in order to separate the optical energy into at least two beams, where a first beam can contain a first information channel and a second beam  
10 can contain a second information channel. The filtering device can be attached directly to the PLC or it can be attached directly to an optical waveguide that is also connected to the PLC. The optical waveguide can either feed optical energy to or propagate optical energy away from the PLC. Multiple optical waveguides can be attached to a PLC to feed optical energy into and away from the PLC. The PLC, filtering device,  
15 and optical waveguide can form the building blocks to more complex optical network architectures.

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